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Executive Summary
M/057/0006

EXECUTIVE SUMMARY

Date Summary Prepared: December 18, 2012

Mine Name: Towers Sand and Gravel	I.D. Number: M/057/0006
Operator: Towers Sand and Gravel, LLC.	Date Original Notice Received: 6/16/2008
Address: 760 North Harrisville Rd. Harrisville, UT 84404	County: Weber
	New/Existing: Status changing from SMO to LMO
	Mineral Ownership: FEE
Contact Person: Kevin Butters	Surface Ownership: FEE
Telephone: 801-782-1515	Lease No.(s):

Legal Description: Portions of the Southeast 1/4 of Section 13, Township 7 North Range 2 West, SLBM, Weber County, Utah.

Mineral(s) to be Mined: Rock for landscaping and aggregate production.

Acres to be Disturbed: 90 acres.

Present Land Use: Open space, grazing, wildlife habitat.

Postmining Land Use: Open space, grazing and wildlife habitat. Operator may change land use to allow residential building.

Variances from Reclamation Standards (Rule R647) Granted: None.

Soils and Geology

Soil Description: Most soils have been disturbed by past mining (gravel extraction) and agricultural practices. The operation will salvage available topsoil for reclamation. It is anticipated that approximately six inches of soil material will be available for the flat area during reclamation. Analyses of the currently stockpiled soil identify it as a gravely loamy sand. Fertility is adequate for reclamation. There are no known problems with salinity, and the pH was measured as 7.24 pH units.

Special Handling Problems: Because of the steepness of the highwall, soil will not be spread on the highwall slope for reclamation.

Geology Description: The eastern portion of the site is primarily quartzite with limestone underlying the western portion. Alluvial materials cover most of the limestone. There are also outcrops of shale that have been mined for clay.

Hydrology

Ground Water Description: Ground water in the general area is thought to be several hundred feet below the surface, but there is a perched aquifer that feeds a small seasonal spring near the quarry. Pleasant View City has a well located approximately 2500 feet to the east of the mine and elevationally below the mine. Other than the seasonal spring, this operation is not expected to encounter or impact any groundwater.

Surface Water Description: There are no perennial surface water sources within or adjacent to this operation. Other runoff, impacts to surface water are not expected. The operator has an approved Storm Water Pollution Prevent Plan.

Water Monitoring Plan: There are no plans to monitor water.

Ecology

Vegetation Type(s); Dominant Species: The area has been significantly disturbed by agricultural practices, gravel extraction, and fire. A mountain shrubland community is believed to have existed on the site prior to mining activities. A vegetation survey in 2007 showed an average of 46% ground cover, and dominant species included mountain big sagebrush rabbitbrush, bitterbrush, bluebunch wheatgrass, Sandberg bluegrass, and intermediate wheatgrass. Major weedy species observed in the area include cheatgrass and dyer's woad (a listed noxious weed).

Wildlife Concerns: There are no threatened or endangered species or species of high interest associated with this operation.

Mining and Reclamation Plan Summary:

Surface Facilities: Facilities at this site are considered portable, and consist of crushing/screening equipment, a scale house, and fuel storage.

During Operations: Topsoil will be salvaged for future reclamation from areas where it is still available. Rock is drilled and blasted, after which it is pushed to areas where it is crushed, screened and stockpiled into different product types. Trucks are loaded from the stockpiles with front-end loaders, weighed and sent to customer destinations. Fugitive dust is controlled with water sprays on crushing equipment and with water trucks on pads and roads. The operator has an Air Quality Approval Order.

After Operations: All equipment will be removed from the site. The highwall will be left at a 1H:1V slope with a catchment trench at the toe of the slope to catch runoff and any rock falls. Most of the area will be graded at approximately a 1% slope to the south and west. Eighteen inches of subsoil will be placed along with six inches of topsoil. The flat area will then be seeded with a mix of shrubs, grasses and forbs designed to stabilize the soil materials and provide forage for grazing and wildlife habitat.

Surety

Amount: \$1,043,430.00

Form: Collateral bond

Renewable Term: 5 years (2017)